# 2023 TAIWAN STARTUP ECOSYSTEM OVERVIEW

## Understanding the Taiwan Entrepreneurial Landscape

Startup Island
TAIWAN

# Startup Island TAIWAN

Startup Island TAIWAN is the national startup brand of Taiwan. The brand symbolizes a journey from a startup island to the international arena. It demonstrates to the world the strong ambition and capabilities of Taiwan startup companies as well as their intention and ability to contribute to other startup ecosystems around the world.

# Editor's Note

In today's world, characterized by the rapid iteration of technology and ever-changing markets, a culture of 'rapid innovation' has taken root. However, gaining a comprehensive understanding of Taiwan's entrepreneurial ecosystem within this context is no simple task. Recognizing the need to enhance systematic knowledge of the country's entrepreneurial landscape for both the Taiwanese community and those with an interest in this dynamic ecosystem, and to establish a foundation for future international collaborations, the Taiwan Institute of Economic Research, in partnership with Business Next and Startup Island TAIWAN, has, under the guidance of the National Development Council, compiled and presented the '2023 Taiwan Startup Ecosystem Report' for reference and broader utilization by stakeholders.

Please note that this report is a condensed rendition of the comprehensive '2023 Startup Ecosystem Report' originally authored and published by the Taiwan Institute of Economic Research. The purpose of this report is to provide a concise overview, emphasizing distinct key points and insights featured within the full report. This succinct presentation is tailored to enable our valued stakeholders to swiftly and comprehensively grasp the current status of Taiwan's entrepreneurial landscape.

**Editors**

Christine Wang, Phoebe Chang

# Introduction

Government support is undoubtedly crucial in fostering innovation within the entrepreneurial landscape. However, achieving self-sustaining growth requires a shift towards a more open and cooperative approach. Consequently, Taiwan's path forward involves nurturing an internationally oriented and prominently visible entrepreneurial ecosystem. This naturally raises the question: How can this path to growth be realized through a collaborative synergy between the government and the private sector? The answer to this question commences with a comprehensive understanding of the local environment.

Building upon the foundation established by our previous publication, the '2023 Startup Ecosystem Investor Report: Paving the Way Toward a Miracle 2.0,' which was released earlier this year, we embark on a comprehensive exploration of the intricate elements that define Taiwan's contemporary startup landscape. While our prior report introduced readers to government initiatives and the venture capital landscape, our present report takes a data-focused approach. Through the presentation of substantial data, our primary objective is to provide readers with a profound understanding of Taiwan's entrepreneurial and startup environment.

Within this report, we conduct an analysis of the government support mechanisms that have contributed to the ecosystem's progress to date. Subsequently, we examine the pivotal role funding plays within a collaborative framework, propelling the ecosystem towards self-sustaining growth.

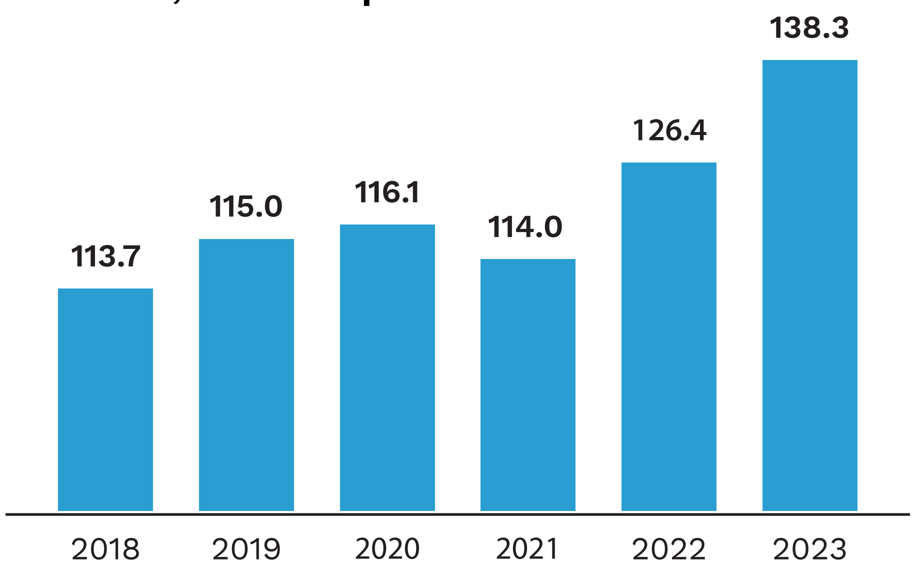
# Taiwan Government’s Support - A Case of Sufficient Resources

In a research report released by the international research institution StartupBlink on August 27, 2018, which included a comprehensive analysis and ranking of 954 cities and 125 countries/regions worldwide, a significant trend emerged. It became evident that "countries with greater levels of government support tend to achieve higher rankings in entrepreneurial ecosystem assessments." This finding underscores the pivotal role played by government policies in shaping and fostering a nation's entrepreneurial ecosystem and its overall development. This section, we detail the Taiwan government’s support in the entrepreneurial and startup ecosystem.

# Taiwan Government's Technology Budget

Since 2016, the Taiwanese government has been diligently promoting innovation and entrepreneurship. Leveraging the momentum of past technological advancements, a comprehensive and globally competitive manufacturing supply chain, and a dominant semiconductor industry, it has been facilitating startups with cutting-edge technology, a pool of skilled professionals, and an environment conducive to rapid product development. Moreover, Taiwan's entrepreneurial spirit, nurtured by its vibrant island culture, has significantly contributed to the thriving entrepreneurial ecosystem.

Taiwan's commitment to technological progress is enshrined in the "Fundamental Science and Technology Act". This legislation mandates the government to present a vision, strategy, and a biennial overview of technological development. It further obliges the government to gather insights from the National Science and Technology Conference, held every four years, encompassing domestic and global technological landscapes and various countries' technology development strategies. This information is used to assess Taiwan's current challenges and compile a white paper on science and technology, outlining the future vision of a technology-based society. In the past three editions of the science and technology white paper, the focus has centered on aligning technological development with industry and societal needs. To achieve this vision and compete effectively in the global research and development arena, the government has substantially increased the technology budget. **For the year 2023, the technology budget has reached a record high of 138.3 billion NT dollars, marking a significant growth rate of 13.8%. This budget allocation reflects the government's unwavering commitment to research, innovation, and development.**




The total government technology budget per year (NTD$ Billion).

# Efforts in Fostering Positive Entrepreneurial Environment

Recognizing the pivotal role of the entrepreneurial environment in fostering business development, Babson College in the United States and London Business School in the United Kingdom have been annually releasing the "Global Entrepreneurship Monitor (GEM)" report since 1999.

This report evaluates economies' entrepreneurial environments through the National Entrepreneurship Context Index (NECI), assessing various aspects, including financial support, government policies, government entrepreneurship programs, education and training, research and development transfer, access to business and professional infrastructure, domestic market accessibility, physical infrastructure availability, cultural and social norms, among others.

In the GEM reports from 2018/2019, Taiwan secured the fourth position in the NECI ranking globally. In subsequent years (2019/2020, 2020/2021, and 2022/2023), Taiwan consistently ranked third in the NECI index. **Furthermore, in the most recent report, Taiwan excels, being among the top 10 in ten entrepreneurial conditions among 51 economies, with three aspects securing the top rank: "Government Policy: Taxes and Bureaucracy," "Commercial and Professional Infrastructure," and "Physical Infrastructure."**

**Ranked**
**4th** in the 2018 - 2019 NECI Ranking Globally

**Ranked**
**3rd** in the 2019 - 2020 NECI Ranking Globally

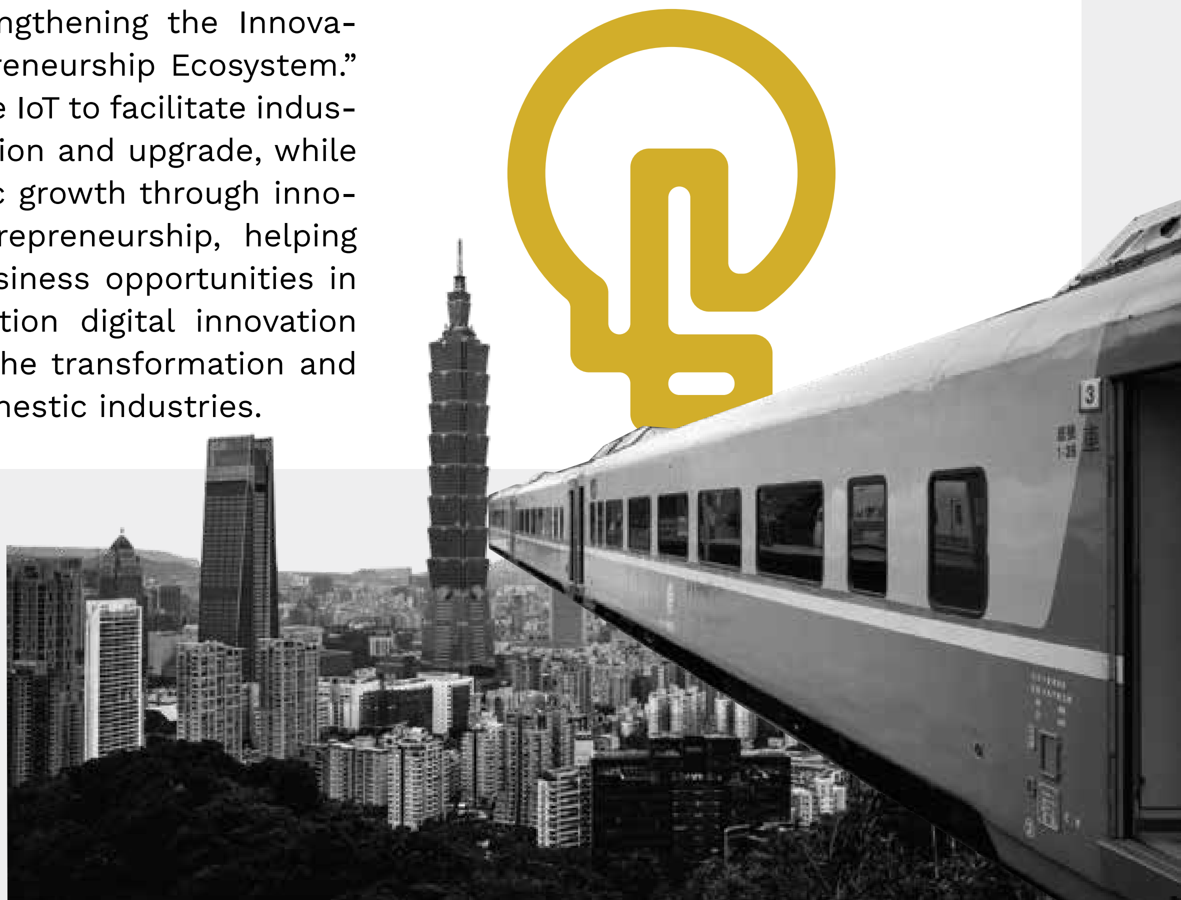
**Ranked**
**3rd** in the 2020 - 2021 NECI Ranking Globally

**Ranked**
**3rd** in the 2022 - 2023 NECI Ranking Globally

# The Next Steps:Cross-Sector Policies

To identify the next wave of growth for the country, the government has planned to leverage its existing strengths in information and communication technology (ICT), semiconductor manufacturing, and connect with global advanced technology research. This strategy aims to enable Taiwan's hard power to transition into software applications, shaping a new economic development model for the country's future. To achieve this, various relevant ministries such as the National Development Council, the Ministry of Economic Affairs, the National Science and Technology Council, and the Ministry of Transportation and Communications have jointly established the "Asia Silicon Valley Development Plan" since September 2016. This initiative focuses on two main pillars: "Promoting the Development of the Internet of Things (IoT)" and "Strengthening the Innovation and Entrepreneurship Ecosystem." The goal is to use IoT to facilitate industrial transformation and upgrade, while driving economic growth through innovation. and entrepreneurship, helping Taiwan seize business opportunities in the next-generation digital innovation and accelerate the transformation and upgrading of domestic industries.

In recent years, with the rapid development of artificial intelligence and 5G technology, the scope of IoT applications has become increasingly extensive. In light of this, following the foundation of the Asia Silicon Valley 1.0 Initiative, the National Development Council coordinated relevant ministries to jointly plan the "Asia Silicon Valley 2.0 Initiative," which was approved in 2021, with the initiative running from 2021 to 2024. **Before the Asia Silicon Valley 1.0 Initiative, Taiwan's innovation and entrepreneurship policies were not considered as cross-sector industrial policies. Instead, each ministry focused on its own tasks and mission for policy promotion and responsibility distribution.**



### On the Level of Academia and Research Institutions

In 2012, to foster an innovation and entrepreneurship culture on campuses, the Ministry of Education launched the "Innovation and Entrepreneurship Campus Initiative"「大專校院創新創業扎根計畫」in an effort to establish a model for campus entrepreneurship that combines curriculum, mentorship, technology transfer, and business incubation. In 2013, in order to spur technology and economic advancement of the country, the National Science Council initiated the "From IP to IPO Program" (FITI) to promote a culture of innovation and entrepreneurship in academia and research institutions. This program served as an incentive policy to facilitate the commercialization of innovative achievements.

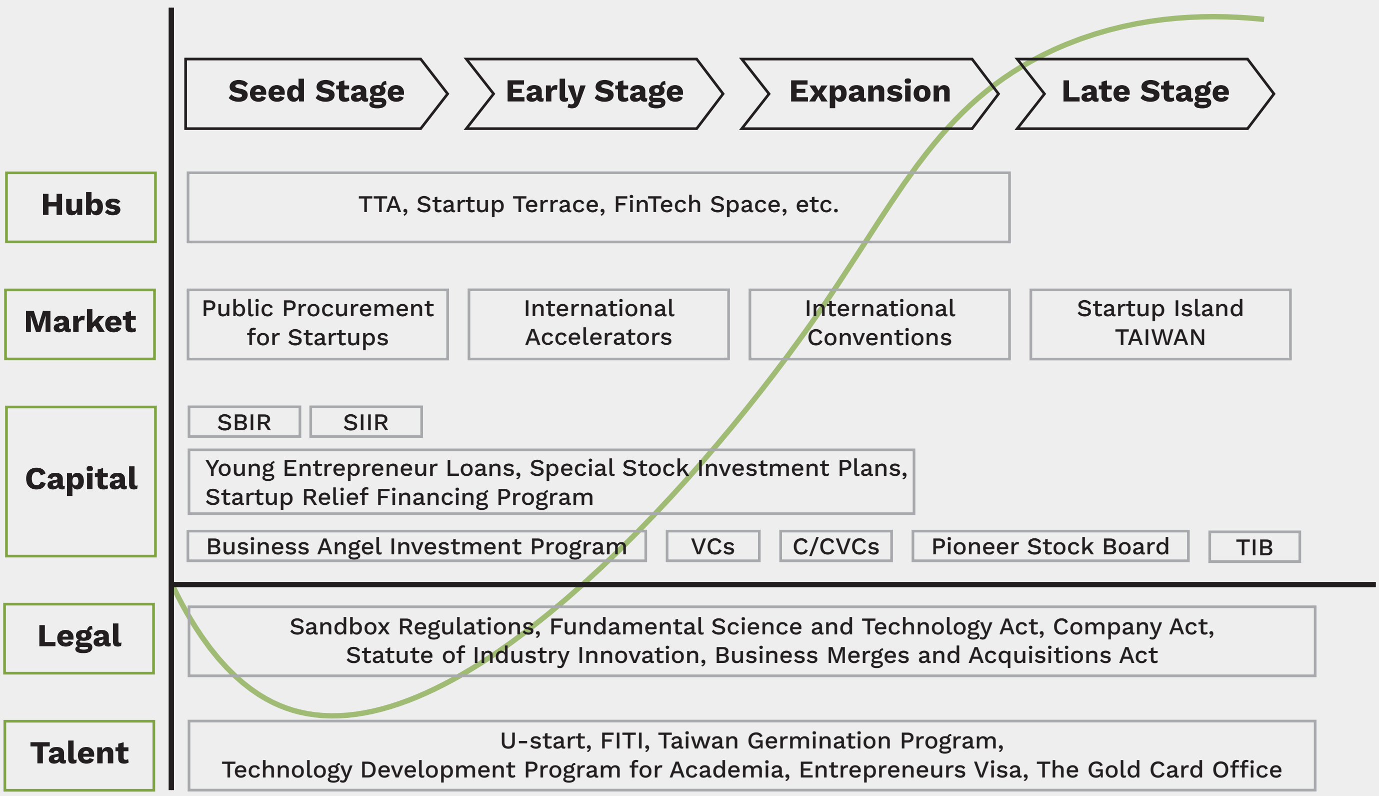
### On the Level of the National Government

As for the National Development Council, in 2014, they launched the "Head-Start Taiwan Program" with the aim of promoting the transformation of our country's economy and industrial structure. Through measures such as strengthening international connections and improving the entrepreneurial ecosystem, the program sought to combine forces from both the private sector and the international community. Additionally, it aimed to enhance market mechanisms, enabling innovative startups with high additional value and international expansion potential to grow rapidly and thrive. The Head-Start Taiwan Program includes three major policies: "Regulatory Simplification," "Attracting International Capital and Expertise," and "Creating International Innovation and Entrepreneurship Zones".

### Cross-Sector Collaboration

In order to further integrate and coordinate the resources allocated by various ministries for startups and entrepreneurship, and to enhance the efficiency of resource distribution and cross-ministerial collaboration, the Asia Silicon Valley Initiative established the Asia Silicon Valley Development Agency (ASVDA), conducting regular working meetings, oversees startups and entrepreneurship projects across different ministries, and facilitates communication and coordination between ministries and local governments. This approach aims to improve the efficiency of policy implementation related to startups and entrepreneurship and encourages cross-ministerial resource integration and cooperation, making startups and entrepreneurship projects across ministries more structured and organized.

Over the years, the government has played a significant role in optimizing the entrepreneurial environment by actively allocating resources in various aspects such as technology development, talent cultivation, funding availability, and market expansion. From 2020 to 2022, both central and local governments collectively invested in 250 projects, with a total budget of 11 billion New Taiwan Dollars (NTD) (excluding National Development Fund investments). These projects provided resources and support in the form of subsidies, investments, guidance, training programs, assistance with domestic and international market development, loans, branding initiatives, competitions, incentives, talent development, and the establishment of environments and working spaces (application fields/experimental fields/entrepreneurial hubs), among other forms of support. Below's illustration demonstrates the government resources corresponding to different stages of startup development.



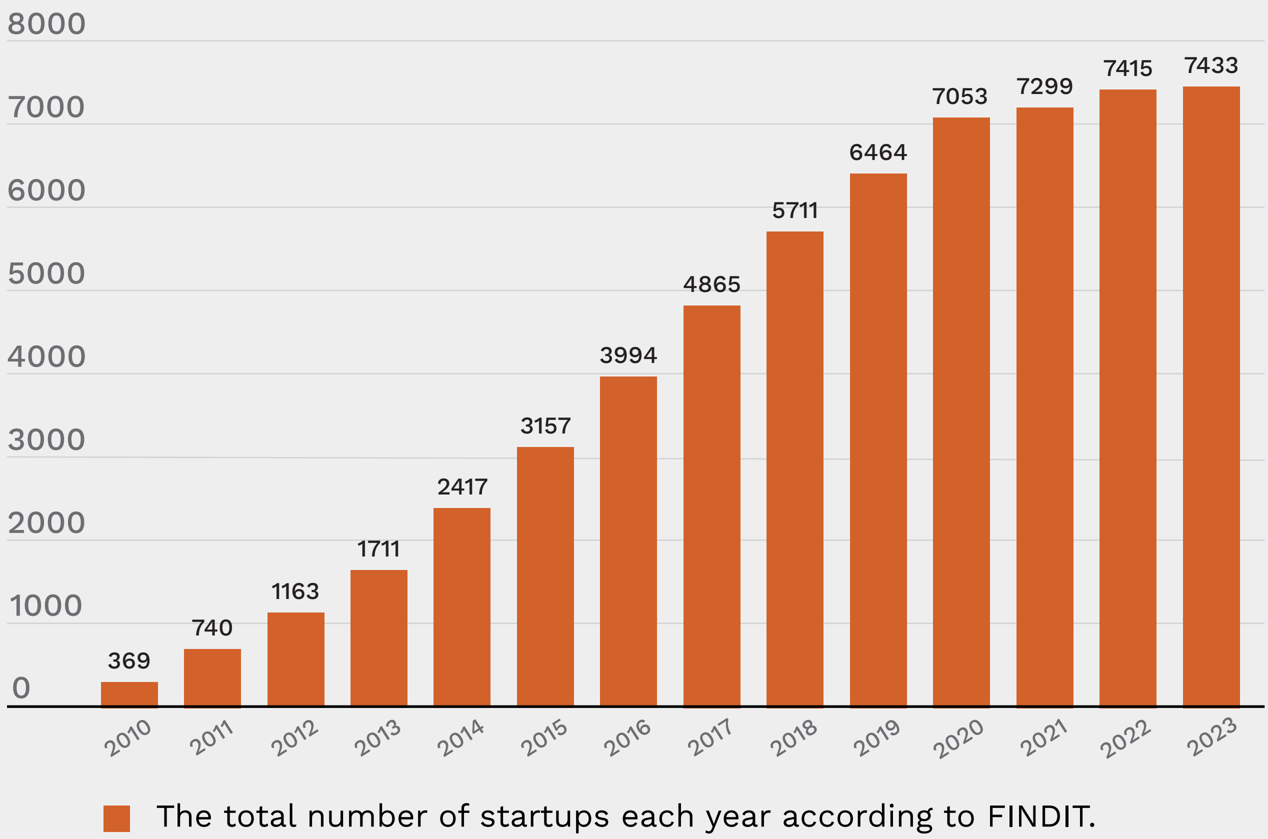
# Taiwan's Startup Scene - Diversity Within the System

**KEY POINTS:**

1. In 2023, there are a total of 7,433 new startups registered in Taiwan.
2. Hardware and manufacturing, biotechnology and ICT industries are the main industries.
3. Startups in Taiwan cary in capitalization, with IPO-ready companies on the rise.

Data from the FINDIT platform reveals 7,433 startups in Taiwan as of July 31, 2023, indicating a steady growth trend since 2010, although the pace has slightly slowed since 2020. When observing the locations where these startups are registered, it's clear that the six major municipalities in Taiwan are the primary hubs for new startups.

These cities naturally attract more new startup resources and are the preferred locations for setting up new businesses. Among these cities, **Taipei City leads with 3,410 registered new startups, followed by New Taipei City (1,017 startups), Taichung City (575 startups), Kaohsiung City (565 startups), Taoyuan City (400 startups), and Tainan City (313 startups).**



In terms of sector distribution, Taiwan's strengths in hardware and manufacturing have given rise to many related new startups. **The combination of these two sectors encompasses a total of 1,098 startups, accounting for nearly 15% of the total. Following closely is the biotechnology sector, which includes healthcare and life sciences, with a total of 903 startups, making up 12.14% of the total.** Additionally, due to Taiwan's robust industry supply chain and technological advantages, along with our key strategic position in the global information and communication technology (ICT) industry as a critical partner, the ICT and software industry-related startups (including software, IT, data analytics, and mobile) are also significant, accounting for 896 startups, or 12.1% of the total.

Regarding the scale of new startups, out of the 7,433 new startups, 4,587 have disclosed their registered capital. Among these, approximately 65% of the startups fall into two capital ranges, with 36% (1,651 startups) having capital amounts ranging from 1 million to less than 10 million New Taiwan Dollars (NTD), and 29% (1,329 startups) having capital amounts ranging from 10 million to less than 50 million NTD. Startups with capital exceeding 100 million NTD account for 16.1% of the total, totaling 739 companies. **Using registered capital as a proxy for maturity and the readiness for an IPO, startups with capital exceeding 300 million NTD are the closest candidates to the IPO stage. This is because larger capital bases provide the necessary liquidity in the market post-listing. There are 289 startups falling into this category, making them strong candidates for an IPO.**

# Taiwan's Funding Landscape - A Continuous Cycle of Growth

Funding plays a pivotal role in the growth of emerging start-ups, and the state of the early-stage funding market is a key barometer of the overall ecosystem's health. While 2022 witnessed a global freeze in the venture capital market, characterized by a rapid decline in transaction volumes, Taiwan's early-stage investment landscape stands in stark contrast, demonstrating sustained high levels of activity.

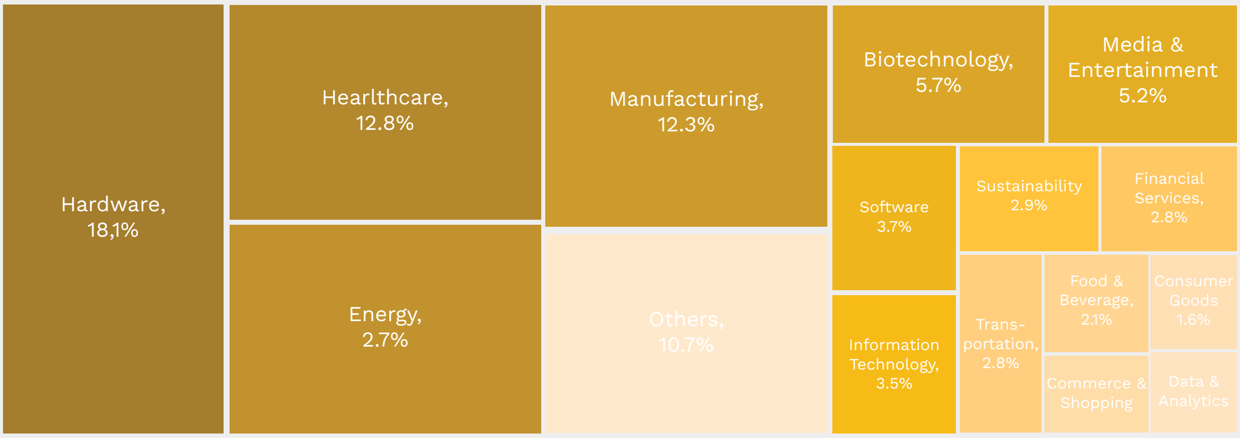
In Taiwan, both the investment amount and the number of deals have remained relatively high in recent years. Overall, from 2015 to the first quarter of 2023, there were a total of 2,921 early-stage investment transactions in Taiwan, amounting to $10.79 billion USD (approximately 323.6 billion New Taiwan Dollars). During this period, approximately 1,848 investment units (excluding individual investors) participated, with corporate and corporate venture capital (C/CVC) entities being the most active. The hot sectors that investors have consistently shown high interest in over the years are healthcare and biotechnology, followed by the energy sector and hardware development and applications.

It is important to note that with the infusion of early-stage funding, Taiwan's startup ecosystem has gradually taken shape over the past 10 years. As the international visibility of Taiwan's startup environment has increased, many startups have ventured abroad and garnered the attention of foreign investors. During this period, numerous startup collaborators and supporters have invested resources and efforts to accelerate the growth of startups. As of June 2023, there are 78 operational accelerators throughout Taiwan, along with 93 startup hubs. Additionally, there are several long-running startup competitions and entrepreneurial communities that have played a consistent role in nurturing and supporting the startup ecosystem.

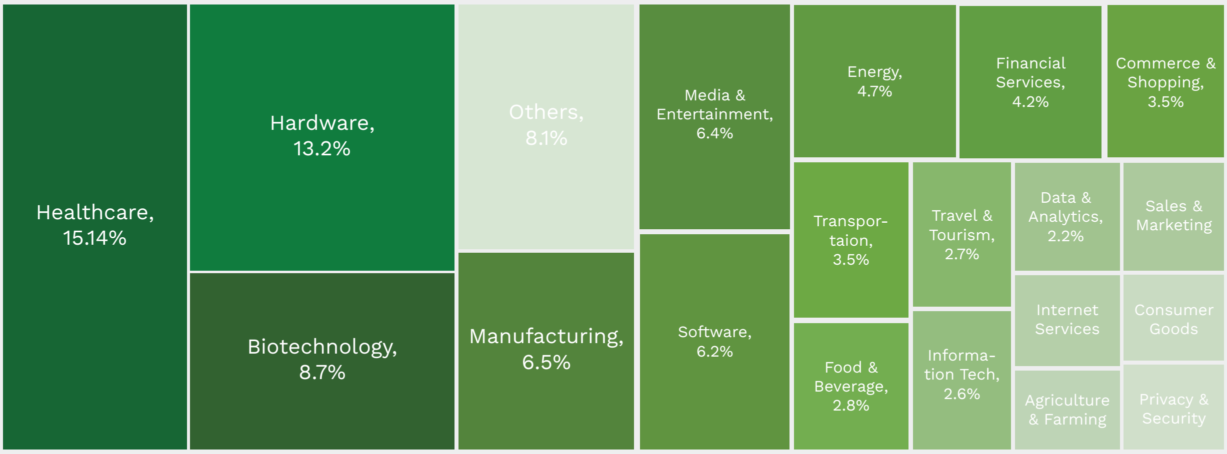
Participation in the early-stage investment landscape in Taiwanm still includes various types of investors, such as individual angels, angel organizations, venture capitalists (VC), corporate and corporate venture capitalists (C/CVC), National Development Fund, and overseas investors. From 2015 to the first quarter of 2023, there were approximately 1,848 investment units (excluding individual investors) participating in these various investor categories.

**On the next page, we present three graphs illustrating the investment distribution of three investor types: VC, C/CVC, and Angel across various industries from 2015 to 2023 Q1.**

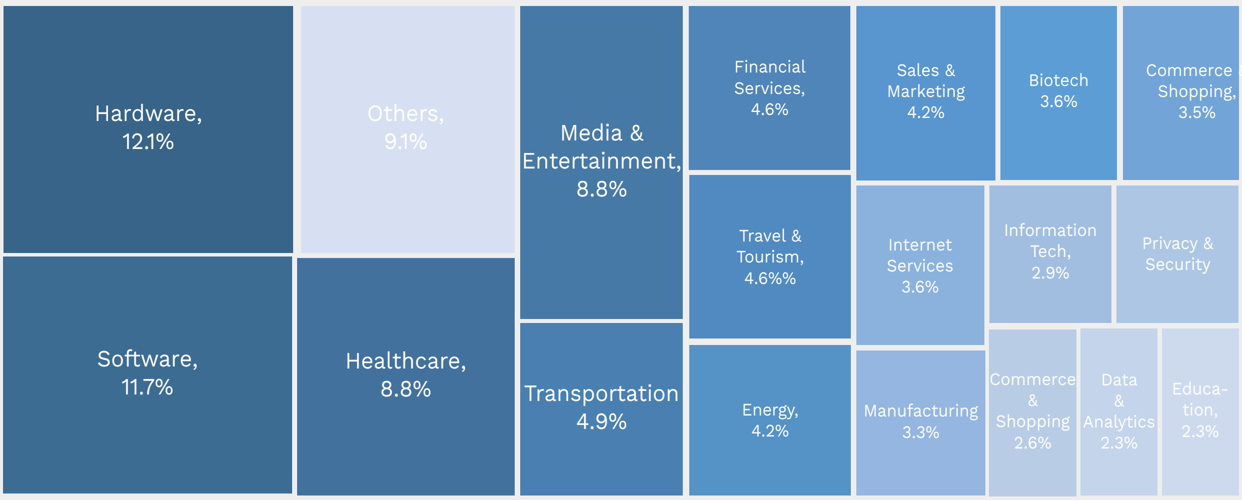
## C/CVC Investment Distribution from 2015 - 2023Q1




## VC Investment Distribution from 2015 - 2023Q1




## Angel Investment Distribution from 2015 - 2023Q1



# Conclusion

A healthy ecosystem comprises three key elements: sufficient resources to sustain the population, diversity within the system, and a continuous cycle of growth and regeneration. When examining Taiwan's "startup ecosystem" from these three perspectives, several significant observations can be made. Firstly, in terms of resources, the government has been focusing on optimizing the early-stage investment environment to encourage ongoing capital infusion, and connecting startups with the international market as the focal point of the current policy. This has been effective in increasing the vibrancy of early-stage investment and raising the international visibility of Taiwan's startup scene.

In the future, Taiwan not only needs to be a source of startup innovation but also should leverage interconnected financial resources and adopt a more open approach to expand international investment and business cooperation. Creating an environment where startups can thrive and providing convenient access to domestic and international resources will gradually become a reality through the accumulation of collaborative efforts on this foundation.

Secondly, diversity is a crucial element. With the evolution of technology, different keywords and hot topics emerge periodically. Sustaining diversity in the ecosystem allows for continuous growth amid changing times and we've witnessed numerous startups from diverse backgrounds shine brilliantly in all fields. In addition to startups that have emerged in response to the development of internet and software technologies, there are also innovations driven by the demands of mature industries. These innovations and applications are rooted in Taiwan's industrial background, distinguishing the ecosystem from others. Startups in fields such as hardware development, hardware-software integration, and semiconductor technologies may not always have a prominent presence at major startup exhibitions. However, due to their industry expertise, technical prowess, and networks, they play a vital role in driving the transformation of Taiwan's industries.

Lastly, the principle of continuous growth is essential. Cultivating more new seeds and driving the iteration and renewal of the ecosystem is a vital aspect of becoming a "Startup Island." This not only involves support for technological and model innovations but also the development and the nurturing of entrepreneurs. It is a long-term challenge that requires deep consideration from a policy and execution perspective. While the government continues to promote the progress of startups and achieves scalability and internationalization, it should not overlook the crucial work of fostering startups from scratch. Startup incubation should go beyond the current functions of community engagement, space operation, entrepreneurial guidance, and advisory services, furthering efforts to focus on exploring market opportunities and nurturing entrepreneurial spirit. Looking forward to the next decade of innovation, we hope to witness the ongoing vibrant development of the ecosystem, connecting talent, technology, funding, and markets, and making Taiwan a global hub for startups.

# Acknowledgements


**Taiwan Institute of Economic Research**

Taiwan Institute of Economic Research (TIER) was established on September 1, 1976 by Dr. Chen-Fu Koo as the first private independent think tank in Taiwan. The main purpose of the institute is to actively engage in research on domestic and foreign macroeconomics and industrial economics in order to provide consultations to the government and enterprises and to promote Taiwan's economic development.

**FINDIT**

FINDIT's mission is to integrate and provide valuable information related to innovative entrepreneurship and market, such as early-stage investment market dynamics, perspectives on the startup ecosystem, and latest ideas of technologies and media.